

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all previous versions and listing of claims in the application.

Listing of Claims

1. (Currently Amended) A bone-powder-impregnated, porous structure comprising a porous matrix made of a biocompatible material impregnated with fine bone powder obtained by pulverizing living bones and/or teeth, wherein the fine bone powder comprises sub-micron particles.

2. (Currently Amended) The bone-powder-impregnated, porous structure according to claim 1, wherein it has fine communicating pores having an average diameter of 0.005-50 μm in its entire body, said fine communicating pores being open on an outer surface of said porous structure at a density of 1 or more pores per an area of 50 $\mu\text{m} \times 50 \mu\text{m}$.

3. (Withdrawn – Currently Amended) The bone-powder-impregnated, porous structure according to claim 1, wherein it has communicating macro-pores having an average diameter of 100-1000 μm in its entire body, which are open on an outer surface of said porous structure at a density of 1 or more per an area of 1000 $\mu\text{m} \times 1000 \mu\text{m}$, and fine communicating pores having an average diameter of 0.005-50 μm , which are open on inner walls of said communicating macro-pores at a density of 1 or more pores per an area of 50 $\mu\text{m} \times 50 \mu\text{m}$.

4. (Withdrawn – Currently Amended) The bone-powder-impregnated, porous structure according to claim 1, wherein it has communicating macro-pores having an average

diameter of 100-1000 μm in its entire body, which are open on an outer surface of said porous structure at a density of 1 or more per an area of 1000 $\mu\text{m} \times 1000 \mu\text{m}$, and fine recesses having an average diameter of 0.005-50 μm and an average depth of 0.005-50 μm , which are open on inner walls of said communicating macro-pores at a density of 1 or more pores per an area of 50 $\mu\text{m} \times 50 \mu\text{m}$.

5. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein said biocompatible material is at least one selected from the group consisting of ceramics, metals, and polymers.

6. (Original) The bone-powder-impregnated, porous structure according to claim 5, wherein said ceramics are calcium phosphate ceramics.

Claims 7.-8. (Cancelled)

9. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein said fine bone powder has an average diameter of 50 μm or less.

10. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein the entire structure is porous.

11. (Withdrawn) The bone-powder-impregnated, porous structure according to claim 1, wherein only a surface layer of said structure is porous.

12. (Withdrawn – Currently Amended) A method for producing a bone-powder-impregnated, porous structure comprising a porous matrix made of a biocompatible material impregnated with fine bone powder, wherein the fine bone powder comprises sub-micron particles, said method comprising the steps of preparing said fine bone powder, and impregnating said porous structure with said fine bone powder.

13. (Withdrawn) The method for producing a bone-powder-impregnated, porous structure according to claim 12, wherein said porous structure is impregnated with fine bone powder in the form of a suspension.

14. (Original) An artificial bone comprising the bone-powder-impregnated, porous structure recited in claim 10.

15. (Withdrawn) An artificial bone comprising the bone-powder-impregnated, porous structure recited in claim 11.

16. (Withdrawn) An artificial dental root comprising the bone-powder-impregnated, porous structure recited in claim 11.

17. (Currently Amended) A bone-powder-impregnated, surface-roughened structure comprising a surface-roughened matrix made of a biocompatible material, which is impregnated with fine bone powder obtained by pulverizing living bones and/or teeth, wherein the fine bone powder comprises sub-micron particles.

18. (Currently Amended) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said surface-roughened structure has fine recesses having an average diameter of 0.005-50 μm and an average depth of 0.005-50 μm , which are open on its entire outer surface at a density of 1 or more pores per an area of 50 μm x 50 μm .

19. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said biocompatible material is at least one selected from the group consisting of ceramics, metals, and polymers.

Claims 20-21. (Cancelled)

22. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said fine bone powder has an average diameter of 50 μm or less.

23. (Withdrawn – Currently Amended) A method for producing a bone-powder-impregnated, surface-roughened structure comprising a surface-roughened matrix made of a biocompatible material, which is impregnated with fine bone powder, wherein the fine bone powder comprises sub-micron particles, said method comprising the steps of preparing said fine bone powder, and impregnating said surface-roughened structure with said fine bone powder.

24. (Withdrawn) The method for producing a bone-powder-impregnated, surface-roughened structure according to claim 23, wherein a rough surface of said surface-roughened structure is impregnated with fine bone powder in the form of a suspension.
25. (Previously Presented) An artificial bone comprising the bone-powder-impregnated, surface-roughened structure recited in claim 17.
26. (Previously Presented) An artificial dental root comprising the bone-powder-impregnated, surface-roughened structure recited in claim 17.
27. (New) The bone-powder-impregnated, porous structure according to claim 1, wherein said fine bone powder is provided from autologous bone.
28. (New) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said fine bone powder is provided from autologous bone.